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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,631	11/20/2003	Jone Chang	2450-0591P	6340
2292	7590	04/27/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			RUDDOCK, ULA CORINNA	
			ART UNIT	PAPER NUMBER

1771

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/716,631

Applicant(s)

CHANG, JONE

Examiner

Ula C. Ruddock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4-4-06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The Examiner has carefully considered Applicant's response filed April 4, 2006. In view of Applicant's arguments, the rejection in view of Lorenzi et al. (US 6,322,801) has been overcome. However, after an updated search, additional prior art has been found which renders the invention as currently claimed unpatentable for reasons herein below.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 discloses a "polymer polyethylene acrylic resin." It is unclear what is being claimed here by Applicant. Does Applicant intend to claim a copolymer of polyethylene and acrylic? Or can the resin be a polyethylene resin or an acrylic resin? It should be noted that the Examiner is treating this claim to read on either a polyethylene resin or an acrylic resin. Clarification/correction is required.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter

as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis, Jr. (US 3,403,070) in view of Gordon et al. (US 5,650,384) and GB 2137080 (GB '080). Lewis, Jr. (US 3,403,070) discloses a foam material used to form the core of filaments in bristles and mop fibers (col 1, ln 11-16). It should be noted that the foam fibers of Lewis, Jr. are being equated to Applicant's sponge fibers, which include a foam body. The fiber further comprises a polyolefin outer shell surrounding the polyurethane foam inner core (col 3, ln 1-4). The polyolefin outer shell can be a polyethylene composition (col 3, ln 11-13). It should be noted that the Examiner is equating Lewis' outer polyethylene composition to Applicant's resin layer. Colorants may be added to the material (col 4, ln 67-68). The filaments of the Lewis invention are used to make mops and various types of brushes (col 4, ln 63-66). Lewis discloses the claimed invention except for the teaching that the fibers are formed in a mesh structure and the resin is colored.

Gordon et al. (US 5,650,384) disclose a cleansing system comprising a mesh sponge (abstract). The mesh sponge comprises polyethylene tubular netting mesh (col 4, ln 25-31).

GB '080 discloses plastic bristle for use in brushes consisting of a supporting core and a working layer (page 1, ln 3-5). The working layer surrounds the core completely and the color of the bristles is determined by the color of the working layer (page 1, ln 100-103). The working layer (i.e. Applicant's resin) can comprise polyethylene (page 3, ln 1-3). The working layer can be formed from differently colored materials (page 3, ln 57-59).

It would have been obvious to one having ordinary skill in the art to have made the fibrous bristles of Lewis and GB '080 into a mesh structure, as disclosed by Gordon, motivated by the desire to create a material that has enhanced rigidity. It also would have been obvious to one having ordinary skill in the art to have colored the outer material of Lewis and Gordon, as disclosed in GB '080, motivated by the desire to create a cleaning material that has enhanced aesthetic appeal.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis, Jr. (US 3,403,070), Gordon et al. (US 5,650,384), and GB 2137080 (GB '080), as applied to claim 1 above, and further in view of Ballesteros (US 4,104,435). Lewis, Jr., Gordon et al., and GB '080 disclose the claimed invention except for the teaching that the resin layer is sprayed onto the sponge fibers.

Ballesteros (US 4,104,435) disclose a sponge material which includes a fibrous reticular structure. A foamed material is formed around the fibrous structure (abstract). One way of joining the fibers together at their points of mutual contact is by spraying the fibers with resins that bond them together (col 2, ln 42-44). The fibers are preferably welded together by spraying them with acrylic resin which produces a wear resistant fibrous structure (col 2, ln 55-58).

It would have been obvious to one having ordinary skill in the art to have used Ballesteros' resin spraying method on the fibers of Lewis, Jr., Gordon et al., and GB '080, motivated by the desire to create a fibrous material structure that has increased wear resistance.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis, Jr. (US 3,403,070), Gordon et al. (US 5,650,384), and GB 2137080 (GB '080), as applied to claim 1 above,

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and further in view of JP 02149241 (JP '241). Lewis, Jr., Gordon et al., and GB '080 disclose the claimed invention except for the teaching that the sponge fibers are immersed in the resin layer.

JP '241 discloses a brush comprising fibers that are impregnated with acrylic resin. It would have been obvious to one having ordinary skill in the art to have used the resin impregnating method of JP '241 on the fibers of Lewis, Jr., Gordon et al., and GB '080, motivated by the desire to create a fibrous material structure that provides protection from surface damage.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

UCR *UCR*

*Ula C. Ruddock*  
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